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Quantization of SEW and REW components for 3.6 kbit/s coding based on PWI

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Abstract:

The design of a prototype waveform interpolation (PWI) based codec, operating at 3.6 kbit/s, is presented with main focus on the quantization of the slowly evolving waveform (SEW) and rapidly evolving waveform (REW) components. The SEW magnitude component is quantized using a hierarchical mean-shape-gain predictive vector quantization approach. SEW phase is derived using a phase model, based on a measure of voice periodicity. The REW magnitude is quantized using a gain and a sub-band based shape. The REW phase is obtained by high pass filtering a weighted combination of the SEW and a white noise process

Index Terms:

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